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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/853,387	05/11/2001	Robert S. Gammenthaler JR.	1285-0037US	6437

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EXAMINER

SORRELL, ERON J

ART UNIT PAPER NUMBER

2182

DATE MAILED: 03/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/853,387

Applicant(s)

GAMMENTHALER, ROBERT S.

Examiner

Eron J Sorrell

Art Unit

2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on preliminary amendment filed 7/29/04.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-22 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/12/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claim 4 (the second instance of claim 4) has been renumbered 22.

2. Applicant is advised that should claim 4 be found allowable, claim 22 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Art Unit: 2182

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Choe (U.S. Patent No. 6,009,093) in view of Morse (U.S. Patent No. 6,628,660).

5. Referring to claim 1, Choe teaches a protocol stack at an application node disposed in a network, comprising:

an input event decoder for decoding an input event including at least a service access point (SAP) and a connection identifier (CID) associated with a service provider layer operating pursuant to a protocol layer service for a particular connection link (see line 50 of column 10 to line 34 of column 11, wherein Choe teaches sending entity identifiers including a SAP and CID, to initiate a service request).

Choe fails to teach a state decoder for decoding state-specific context information retrieved by a context switch

Art Unit: 2182

control block from a context memory based on the SAP and CID and a generic state machine (GSM) logic structure operable to be personalizable based on the state-specific context information, the GSM logic structure having a state logic package partitionable into a control plane and a data plane, said control plane operating to process the decoded input event based on the decoded state-specific context information and the data plane operating to process data operations relating to said protocol layer service, wherein said control and data plane are operable to exchange layer parameters for the service provider layer. However, Choe does teach exchanging layer parameters for the service provider layer (see lines 34-47 of column 11).

Morse teaches a system for optimizing state machine transitional performance in a protocol stack at an application node comprising, a state decoder for decoding state-specific context information retrieved by a context switch control block from a context memory (see lines 22-55 of column 4) and a generic state machine (GSM) logic structure operable to be personalizable based on the state-specific context information (see lines 22-55 of column 4), the GSM logic structure having a state logic package partitionable into a control plane and a data plane, the control plane operating to process the decoded input event based on the decoded state-specific context

Art Unit: 2182

information and the data plane operating to process data operations relating to said protocol layer service (see paragraph bridging column 2 and 3, wherein a data plane is disclosed and lines 22-55 of column 4, wherein a control plane is disclosed).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Choe with the above teachings of Morse such that the system includes the state decoder and GSM logic structure. One of ordinary skill in the art would have been motivated to make such modification in order to reduce the amount of hardware needed for protocol processing as suggested by Morse (see lines 1-15 of column 2).

6. Claims 2-6,14-18, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choe in view of Morse as applied to claim 1 above, and further in view of Allred et al. (U.S. Pub. No. 2004/0078717 hereinafter "Allred").

7. Referring to claim 2, the combination of Choe and Morse teaches the system of claim 1, however the Choe-Morse combination fails to teach the system further comprising a tester block for performing tests on input parametric

Art Unit: 2182

information extracted from the decoded input event and the decoded state-specific context information.

Allred teaches, in an analogous system, the above limitation (see paragraph 79 on page 7).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the combination of Choe and Morse with the above teachings of Allred. One of ordinary skill in the art would have been motivated to make such modification in order to allow companies to test their communications networks without intruding on restricted-access devices or subnets as suggested by Allred (see paragraph 10 on page 1).

8. Referring to system claim 3 and method claims 16 and 17, Allred teaches the system further comprising an operations module for performing cyclical redundancy check (CRC) operations and protocol overhead operations on input parametric information extracted from the decoded input event and the decoded state-specific context information.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention modify the combination of Choe and Morse with the above teachings of Allred. One of ordinary skill in the art would have been

Art Unit: 2182

motivated to make such modification because it is well known that CRC bits are routinely checked to determine if there was a transmission error.

9. Referring to method claims 4,5, and 22, Allred teaches the analyzer is placed within the network and can non-invasively monitor network communications output from the tester is input into the system, so the control plane would be operable to receive test output from the tester block and provide control input to the operations module (see paragraph 83 on page 7).

10. Referring to claim 6, the combination of Choe and Morse teaches the system further comprises and output event encoder for generating a coded output event based on output provided by the control plane and operations module (see Morse, lines 22-55 of column 4) and a state encoder for generating a coded next-state information based on next-state output provided by the control plane and on parametric output provided by the operations module (see Morse, lines 22-55 of column 4).

11. Referring to claim 14, see rejections of claims 1,2,3, and 6, as claim 14 is a combination of these claims.

Art Unit: 2182

12. Referring to claim 15, the combination of Choe and Morse teaches the decoder block comprises an input event decoder for decoding the input event information (see Choe, line 50 of column 10 to line 34 of column 11) and a state decoder for decoding the state-specific context information (see Morse, lines 22-55 of column 4).

13. Referring to claim 18, Allred teaches wherein said tester block is operable to perform at least one of a plurality of sequence number tests and other tests on inputs (see paragraph 79 on page 7).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the combination of Choe and Morse with the above teachings of Allred in order to determine if the network is transferring data correctly as suggested by Allred (see paragraph 10 on page 1).

14. Claims 8-13 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choe in view of Morse and further in view of Allred as applied to claims 2-6 and 14-18 above, and further in view of Gradischnig (U.S. Patent No. 5,748,636).

Art Unit: 2182

15. Referring to system claims 8-13 and method claims 19-21, the combination of Choe, Morse, and Allred teaches the GSM logic structure is personalizable to perform operations of a particular service layer and transfer layer data based on state-specific context information from the context memory in an ISDN network (see Morse, lines 22-55 of column 4, and Choe lines 10-13 of column 2), however the combination fails to teach the logic structure is personalizable as one of a Service Specific Control Function (SSCF) control state machine, an Asynchronous Transfer Mode (ATM) Adaptation Layer (AAL) control state machine, or a Service Specific Connection Oriented Protocol (SSCOP) control state machine based on state-specific context information and can transfer SSCOP, SSCF, and AAL data based on the state specific context information.

Gradischnig teaches an ISDN protocol comprising an SSCOP layer, an SSCF layer, and an AAL layer (see figure 1 and lines 1-57 of column 3).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify combination of Choe, Morse, and Allred with the above teachings of Gradischnig because Gradischnig teaches these particular protocol layer are implemented in an ISDN network based protocol

Art Unit: 2182

stack, and Choe teaches the network interface is an ISDN network interface.

Allowable Subject Matter

16. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following documents are cited to further show the state of the art as it pertains to generic state machines:

US Pub No. 2001/0032069 to Arweiler et al. teaches protocols can be described using a state machine and further teaches a device for analyzing data comprising a generic state machine emulator;

WO 02/28047 A2 to Foti teaches a call server comprising a generic state machine.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eron J

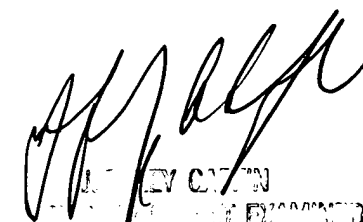
Art Unit: 2182

Sorrell whose telephone number is 571 272-4160. The examiner can normally be reached on Monday-Friday 9:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A Gaffin can be reached on 571 272-4146. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EJS
March 1, 2005


JEFFREY A. GAFFIN
PATENT EXAMINER
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